

# Universal-Measuring-Transducer MU1000K

## Temperature Pt 100 (RTD), DC Current and Voltage, Isolating Amplifier

### MU1000K



Part number: **T236002.1**

Universal-measuring-transducers MU1000K can measure signals Pt100 (RTD) and DC current (0/4-20 mA) and voltage (DC 0/2-10 V). Several measuring-ranges are pre-programmed. More can be easily scaled. Temperatures at sensors Pt 100 can be evaluated from -200 °C to + 800 °.

The output-signals 0/2-10 V and 0/4-20 mA are potentially separated from inputs and supply-voltage.

With its universal power-supply AC/DC 24-240 V the measuring-transducer can be connected to all common supply-voltages.

Inputs:

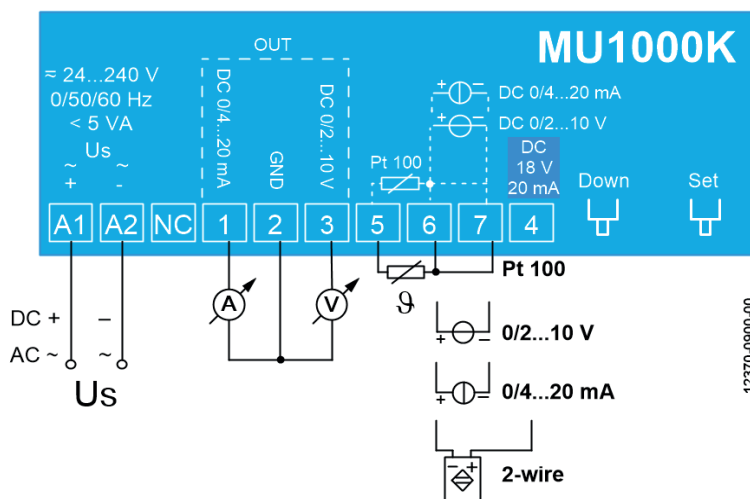
- DC 0/2-10 V, DC 0/4-20 mA
- Supply-voltage for external measuring transducer DC 18V/25 mA

- Input Pt 100, 3-wire, -200 ... +800 °C
  - automatic compensation of line-resistance
  - pre-programmed zeros and spans
  - individually programmable zeros and spans

Outputs:

- DC 0/4-20 mA, DC 0/2-10 V
  - Insulation between inputs, outputs and supply-voltage
- Displays and control elements:
- 2 buttons for scaling
  - 4 LEDs for display of state and scaling

Universal supply-voltage AC/DC 24-240 V  
Housing type K, 22,5 mm wide



### Technical Data

Rated Supply Voltage $U_s$	AC/DC 24V-240 V, 0/50/60 Hz < 3 W < 5 VA DC: 20,4 - 297 V, AC: 20 - 264 V
Input DC-Voltage Accuracy	DC 0/2-10 V, max. 27 V, 12 k $\Omega$ $\leq 0,1\%$ from fullscale
Input DC-Current Accuracy	0/4-20 mA, max. 100 mA, 18 $\Omega$ $\leq 0,5\%$ from fullscale
Input Pt 100 Temperature-range	Pt 100 acc. to EN 60 751 / IEC 60 751, 3-wire -200 °...+800 °C
Line-resistance Accuracy	max. 500 $\Omega$ (sensor + line) $\pm 0,5\%$ from value $\pm 0,5$ K, drift: $\leq 0,04$ °C/K
Sensor-current	$\leq 0,6$ mA
Output voltage Accuracy	DC 0/2-10 V, load min. 1 k $\Omega$ 0,3 % from fullscale, drift <0,01 %/K
Output current Accuracy	DC 0/4-20 mA, load max. 500 $\Omega$ 0,3 % from fullscale, drift <0,015 %/K
Error load	0,3 % of current x (250 $\Omega$ - load) / 250 $\Omega$
Galvanic insulation	supply-voltage - input - output
Response-time T09 Pt100	< 350 ms
Voltage-/Current input	< 20 ms
Test conditions	see "general technical information"
rated ambient temperature-range	-20 °C ... +65 °C, EN 60068-2-5 dry heat
Housing dimensions (h x w x d)	type K, 75 x 22,5 x 115 mm
Protection housing/terminals	IP 40 / IP 20
Attachment	35mm standard-rail or screws M4 (option)
Weight	app. 100 g